The Medical Fortnightly.

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UNDER THE EDITORIAL DIRECTION OF

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Editorial Department.

The Doctor and His Investments.

EVIDENTLY the dealers in investment securities believe that physicians are good patrons to all that has about it the name "investment." We judge of this by the perfect deluge of literature pertaining to oil wells, gas wells, zinc mines, gold mines, copper mines, etc., etc., which floats in to our office, and all giving the promise of great returns. Doubtless such enterprises, are officered by men whose integrity is as unsullied as that of the moon, whose belief in the goods is as devout as that of a monk, and who play the game for all there is in it. We personally know physicians who bite at every scheme that floats—we presume gold bricks are so numerous in their offices that they are used for paper weights, ornaments, etc. Somehow these ornamental reminders of the frailty of human wisdom, and the utter abject poverty of conscience in some brokers, do not offer any obstruction to the pathway toward further folly when a new scheme is presented.

It strikes us that the average physician is about as capable of floating a gold mine as he is to teach J. P. Morgan some new things about stocks; about as capable of multiplying dollars by investment as he is of making canary bird-eggs bring forth "the omniverous ostrich."

The fellow who thinks he is up to the game, can work all side lines, pull all wires and land with buttered side up all of the time, is sure to be a physician. He may win on the first deal and then, oh! then, he is sure to go against the first new thing that comes along. He buys like a school-boy, plays the game like he had a new toy, but at last finds he is but a whisper after all. Such a physician has about as much need for stocks as he has for an air-ship. The investment is just as profitable. Our humble belief is that physicians who have a surplus of money who really seek investments had better consult their home banker, consult his judgment and abide by his decision. Above all things have nothing whatever to do with investment securities not properly listed and endorsed by reputable financial agents. Throw the wild cat literature in the waste basket, and try to keep your dollars away from the sharks who seek it. F. P. N.

The Roentgen Ray in the Treatment of Malignant Disease.

THE RECENT reports of successful treatment of malignant disease by the use of Roentgen ray is one of the marked advances in therapeutic art and science. The work of Pusey of Chicago, Williams of Boston, and Hopkins of Brooklyn, and others has in it the hopeful possibilities of successful treatment of these very unfortunate cases, and gives this treatment a reliable footing. While the work is yet more or less experimental it is sufficiently advanced, and the results so encouraging as to warrant its use in all indicated malignant cases under such precautions, as experience indicates. The results which have followed the use of the X-ray in cases of inoperable cancer, lupus of the face, and even in sarcoma have been wonderful. The line of cases recently reported by Pusey, Chicago Medical Society, February 26, 1902, and Tri-State Medical Society, April 4, 1902, show remarkable success and proclaim the rich possibilities of this new era in the therapeutics of malignant disease. Pusey seems to have achieved results beyond the hopes of the most sanguine of the German experimenters, and he is truly the pioneer in this work. He is evolving the technique of treatment and studying the limitations of radio-therapeutics.

We are on the eve, if not already attained, what seems to be a revolution in the treatment of malignant affections, especially when limited to the skin surfaces. The cures seem permanent in carcinoma and lupus, and benefit has followed the treatment in sarcoma.

Hopkins is bold enough to recommend the use of X-ray in inoperable cases of uterine cancer. Pusey has used this treatment successfully in carcinoma of the breast, both where there is ulceration and in the cases of simple satellite nodles. He also regards this treatment as successful, and therefore, advises its use in recurrent carcinoma after amputation of the breast. The cosmetic effects of this treatment are remarkable as there always seems to be uniform healing with smooth surfaces and without disfiguring scar tissue.

But the one great triumph is the saving of patients who seemed doomed to die from the effects of these dread malignant diseases. The reports of cases treated by this method are encouraging, and while doubtless there will be failures, yet, the results thus far proclaim the X-ray treatment one of the great triumphs of medical science. Dr. Pusey does not claim his cases are cured, he simply regards them as symptomatically cured, and will wait the usual three years before feeling secure in the results attained. However, the absolute disappearance of the malignant growths with the appearance of healthy scar tissue; tissue in fact, devoid of every histological evidence of malignancy, certainly justifies the assumption that a permanent cure has been attained in the cases he has already reported.

Again, these results show the effect of the X-ray is distinctly upon the tissue cells, a chemical change no doubt, which arrests growth and development and causes the utter annihilation of the cells. The development of this treatment will be watched with much interest, and we will report progress from time to time.

F. P. N.

The Latest Points in Reference to Disinfection.

THE VARIOUS phases of contagion and disease shifting from point to point have rearranged, in the past few years, our ideas with regard to disinfection. In the first place, the development of the importance of the mosquito in typhoid fever and malaria has directed attention to the destruction of this active insect, and the great "Insect Peril" of 1902 must be fought along intelligent lines. The United States government has been active in measures for the destruction of the mosquito and the result has been that sulphur dioxide, which fell into disrepute some ten or fifteen years ago, has again come into great prominence. It has been found by experiments in the United States Marine Hospital Service, made by Dr. Rosenau, that sulphur is very potent in the destruction of these insects, even when the quantity of the disinfectant and the time of exposure are reduced, so that non-spore bearing bacteria are not harmed. Mosquitoes were exposed to the action of sulphur, which was burnt in a small pot, in pill boxes, under one, two and even four layers of toweling, wrapped twice in towels, covered with sheets of newspapers, in the inside pockets of overcoats, on walls, back of three towels, on floors under loose towels, with the result that it was seen that sulphur dioxide possesses considerable penetrating power, for in every instances the mosquitoes were killed. It was found that even under eight layers of damp toweling the fumes of the sulphur reached and killed these insects, so that it was determined that the mosquito even when protected by dry or moist fabrics could not escape the gas.

When it came to the use of formaldehyde it was soon found that this drug was not capable of destroying the mosquito. It was found that formaldehyde gas could penetrate insufficient strength to overpower the non-spore bearing organisms. In the pockets of overalls, or through a layer of toweling, but it did not injure the mosquito. When the mosquitoes were given the same advantages as under the sulphur test, they escaped the effects of the gas, so that an exposure of six hours was not enough to kill them, though they had only the slight protection of one layer of crash toweling. Even when the autoclave was used, which is probably the most efficient form of using formaldehyde, the mosquito escaped. This test of the formaldehyde gas against the mosquito did not, of course, injure its reputation against bacteria, and should not be so confused in the professional mind.

In the use of formaldehyde for disinfection, the autoclave has been recommended by the United States quarantine regulations. It is one of the best of all methods of disinfection that can be employed at present, being extremely convenient, as it does not require the workmen who are doing the disinfecting, to enter the room or the house to be disinfected, and it is possible for one workman to disinfect four or five houses in a day and secure the best results. It does not injure such household objects as hangings, fabrics, etc., and consumes only a short period of time in its operation. It has been shown by experiments at Rouen that rooms may be slept in the same night after disinfection, or at the latest the next day.

Besides, this method is regarded as absolutely sure for the destruction of pathogenic germs, with the exception of bacillus subtilis and bacillus mesentericus, which, not being pathogenic are not of value in this connection.

The experiments made by Trillat showed the value of the autoclave. It is used in the following manner. Being charged with a solution of formaldehyde and calcium chloride (under the name of formo-chlorol), the top is put on and firmly screwed down and then a petroleum lamp is lighted. The valve is kept closed until the pressure of the vapors reaches three atmospheres at which time the escape tube is introduced through the key-hole into the apartment to be disinfected and slowly the valve is turned on. Care must be taken previously that all openings to the apartment are closed, and if doors or windows fit badly strips of paper should be pasted over the cracks. All closet doors and cupboards and table drawers should be left open. This same operation can be extended to the entire house if necessary if the autoclave used is large enough. Trillat found that 300 grammes of pure formaldehyde are enough for 200 cm. The operation for a place of this size requires an hour. When the escape tube is withdrawn then the key holes should be stuffed up. At first it was thought that the apartment should be kept closed for twelve hours, but it is now thought that in an hour or two the sterilization is complete. Care should be taken about the inhalation of these vapors for they are irritating to the conjunctiva and lungs. If necessary, one should place a handkerchief over the mouth and nose, put on glasses, enter quickly, open the windows and go out at once. In about ten minutes time the air will become respirable. If the vapors have remained in contact with fabrics in the room a day it will require some time for the odor to disappear. In all cases the odor can be removed if liquid ammonia is sprinkled over the floor or placed in dishes through the room.

There have been a number of interesting experiments made in the use of the autoclave at various points. For example, Bosc in the pavillion for contagious diseases of the Hotel Dieu Saint Eloi at Montpelier took a room, the contents of which were 737 metres. In this room were placed cultures of different microbic germs, as spittle, pus, etc. The autoclave was used for six, then for twenty-four hours, giving identical results. The following microbes were used: staphyhlococcus, bacillus coli, diphtheritic bacillus, morvic bacilli pyogenic chicken cholera, aspergitis, trichophyton, sporulated anthrax bacillus, and all were equally effective, and was found that all the bacteria had been destroyed.

Sprague of the United States Marine Hospital Service, has done considerable experimentation with formaldehyde, and comes to the conclusion that it is superior to steam, carbolic acid, sulphur and chloride of mercury. His experiments have been rather to see how far the time of exposure can be diminished. For this purpose he used a Kenyoun Francis Disinfector, in which calcium chloride was heated with the formaline, by which he found that the percentage of gas generated could be calculated with certainty. He injected the gas into a room, as was done by the other investigators, and made exposures of from fifteen to sixty minutes. He found that

surface disinfection was accomplished in 20 per cent of cases after thirty minutes exposure just as well as after one hour's exposure, but the results in the interiors of mattresses and pillows were not entirely satisfactory. He found that disinfection of food (?) and articles of that nature could be well accomplished in thirty minutes time. This saving of time is of importance, especially quarantine stations, for if results can be obtained in thirty minutes that ordinarily are thought to require four hours, it makes great increase in the efficiency of the time and diminution of the work. He believes that in higher percentages of gas better results can be obtained.

Sprague has made later series of experiments in the use of formaldehyde, using 40 per cent solution of the gas. His idea is to determine the quantity of gas and the degree of heat required for complete disinfection in one hour or less. He came to the conclusion that the degree of heat required is important, for he found that when an increase in temperature of the chamber was made to 90 C. disinfection was complete in thirty minutes, while in other series in which a lower temperature was used anthrax was only rarely destroyed, and he comes to the conclusion that the germicidal effects of the formaldehyde are greatly intensified by the use of heat.

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Official Journal of the Tri-State Medical Society.—At its annual meeting, held in Chicago on April 8th, the Medical Fortnightly was chosen the official journal of this association, and all papers and transactions of this session will shortly appear in these pages.

Dr. Albert C. Corr, of Carlinville, Ill., died April 2, 1902, after a short illness. Dr. Corr was President of the Illinois State Medical Society in 1896; a former member of the Illinois State Board of Health, and always has been prominently identified with the progressive element of the profession of the State. The following resolutions were passed at the meeting of the Macaupin County Medical Society April 4th:

Whereas, In obedience to Nature's fixed and unalterable law of life and death, we must part from A. C. Corr, the nestor of our society, a charter member and one of its constant supporters, more than twenty-five years its secretary.

Resolved, That we mourn his loss as a brother physician, cut down while in active work for the cause of science and humanity.

Resolved, That we escort him to his last resting place, to await the coming of the Great Physician, whose touch heal all sorrow and pain.

Resolved, That a suitable floral emblem be placed upon his bier, as a public testimonial of our appreciation of his beautiful character as a friend, counselor and Christian gentleman.

Resolved, That a copy of these resolutions be made of record and a copy be sent to the bereaved wife and partner.

Resolved, That a copy be sent to the city papers and to the State and National medical journals.

CITY CULLINGS.

THE MARRIAGE of Dr. Philip Von Phul and Miss Celeste Emily Michel, occurring on the evening of Thursday, April 10th, was one of the most interesting social events of the post-lenten season. Mrs. Von Phul is the daughter of Dr. and Mrs. Charles Michel. The FORTNIGHTLY extends congratulations.

SMALLPOX AND VACCINATION.—Of the 224 smallpox patients sent to our local quarantine hospital during the year ending March 31st, 1902, 169 had never been successfully vaccinated. Those who had been vaccinated reported almost without exception that it was done either in infancy or since exposure to smallpox.

DEATH OF DR. MCINTYRE.—The death of Dr. J. H. McIntyre removes another veteran from the ranks of the local profession. The doctor had been greatly distressed by asthmatic attacks for some months and the disease had compelled him to almost entirely give up practice previous to the final attack. His death occurred on the 11th of April. Dr. McIntyre has so long been a familiar character in the city and vicinity and at various medical gatherings that his absence will be deeply felt by the host of friends who deplore his death.

JEWISH HOSPITAL STAFF.—The executive committee of the St. Louis Jewish Hospital has selected the following mdical and surgical staff: Herman Tuholske, M. D., surgeon-in-chief; Jacob Friedan, M.D., physician; Henry Schwartz, M.D., obstetrician; Robert Luedeking, M.D., pediatrician; Henry Wolfner, M. D., ophthalmologist; Hanau W. Loeb, M. D., laryngologist; Max A. Goldstein, M.D., otologist; Philip Hoffman, M.D., orthopedist; Sidney I. Schwab, M. D., neurologist; Wm. P. Loth. M. D, dermatologist; B. Meade Bolton, M. D., pathologist; Ernst Jonas, M. D., gynecologist. The associate visiting surgeons are Doctors John Grant, William Robertson, Willard Bartlett and William S. Deutsch. Associate visiting physicians are Doctors Jesse S. Myer, Louis J. Wolfort, Gustav Lippmann, Aaron Levy and Albert Faller.

A CORRECTION.—In our last issue, in the editorial on the St. Louis Medical Society, page 209, a printer's omission occurred which made us say exactly what was *not* said in the original copy. The omission occurred in the paragraph referring to the paper presented by Dr. Lewis on the "Operative Treatment of Prostatic Obstruction." The paragraph, as written, should have read as follows: "The paper of Dr. Lewis was one of the best in every point of view that was ever presented before this society. The doctor considered the various operations in detail, and the indications for each. He clearly demonstrated that no one operation can be used for all cases, and insisted that the conservative operator will make himself familiar with all methods and all routes, and will after careful examination in each individual case be governed by the existing conditions to decide which operation to employ."

The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis.

A Text-Book of Medicine for Students and Practitioners. By Dr. Adolf Strumpell, Professor and Director of the Medical Clinic at the University of Erlangen. Third American edition, translated by permission from the 13th German edition, by Herman F. Vickery, A. B., M. D., Instructor in Clinical Medicine, Harvard University and Philip Coombs Knapp, A.M., M.D., Clinical Instructor in Diseases of the Nervous System, Harvard University; with editorial notes by Professor F. C. Shattuck, Jackson Professor of Clinical Medicine, Harvard. 1242 pp., with 186 illustrations. New York: D. Appleton Co.

Strumpell's Practice needs no word of commendation from us; it is one of the classics in America, as well as in Europe. The second edition presented to American readers appeared in 1893, since which time there have been seven German editions; this, being a translation of the latest, is practically a new work. In translating, the magnificent original has been closely followed; there has been no tampering with the opinions and procedures presented therein. The only changes are editorial additions and comments, and the formulas and doses are given in both metric and apothecaries, where the original is confined to the metric; these points materially increase the value of the work to American readers. Strumpell's Practice has been translated and published in French, English, Italian, Spanish, Russian, Greek, Turkish and Japanese. There is probably no other work on the subject which has so large or so cosmopolitan an audience. This being so, makes further dilation on its worth superfluous.

Libertinism and Marriage. By Dr. Louis Jullien (Paris). Surgeon of Saint-Lazare Prison; Laureate of the Institute, of the Academy of Medicine, and of the Faculty of Medicine of Paris. Translated by R. B. Douglas. Size of page, 5½x7½ inches; pp. 169. Philadelphia: F. A. Davis Co. Extra cloth, $1.00, delivered.

This attractive volume appears under a somewhat misleading title,—gonorrhea is almost invariably the reward of libertinism, but it is but one feature of a career which brings suffering to innocent parties as well as to guilty. In a very thorough manner the author deals with the various possibilities of gonorrhea and marriage. The infection of an innocent party ought to be a crime, and especially is this true where the innocent party is a loving wife.

A reading of this volume will awaken any physician to his responsibility; it may be difficult to demonstrate a cure, but so long as there is even a suspicion there should be nothing but continence for the patient. The abomination of allowing a patient who has recently had the gonorrhea to marry, is responsible for a vast amount of misery.

We may not be able to sanction all of Dr. Julien's ideas, but we would say amen to the general idea of the book, and we hope that a large number of our readers will have an opportunity to peruse it.

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Simon's Manual of Chemistry. A guide to lectures and laboratory work for beginners in Chemistry, specially adapted for students of medicine, pharmacy and dentistry. By W. Simon, Ph. D., M. D., Professor of Chemistry, in the College of Physicians and Surgeons, of Baltimore, in the Maryland College of Pharmacy, and in the Baltimore College of Dental Surgery, Seventh edition, thoroughly revised and much enlarged. In one octavo volume of 613 pages, with 66 engravings, one colored spectra plate and eight colored plates representing 64 of the most important chemical reactions. Philadelphia and New York: Lea Brothers & Co. 1901. (Cloth, $3.00, net).

The study of Chemistry with such a guide as is this volume, is indeed a pleasure. Dr. Simon has the happy faculty of making the most abstruse of chemistry attractive, and he makes the majority of students enthusiasts. The clean, clear text and the definiteness of it as a whole explains the great popularity of the work. The present revision was made necessary by important recent advances in science. The sections on Chemical Physics and Physiologic Chemistry have been considerably enlarged.

As in previous editions, the subject has been divided into seven parts. Care has been taken to place in the foreground all facts and data which are of direct interest to the physician, pharmacist, and dentist. The first part, treating of chemical physics, has been largely rewritten, and much new matter added. Electrolysis and the Ionic Theory are briefly considered from a modern standpoint, and a colored plate giving the spectra of a number of substances has been added. The last section giving the principal facts of Physiological Chemistry, was prepared for the benefit of the medical student in particular. Much new matter has been added to these chapters, and special care has been taken to mention the most modern methods for chemical examination in clinical diagnosis. As an aid to laboratory work, a number of experiments have been added which may readily be performed by students with a comparatively small outfit of chemical apparatus.

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A Manual of Bacteriology. By Herbert U. Williams, M. D., Professor of Pathology and Bacteriology in the Medical Department of the University of Buffalo. With ninety illustrations. Second edition, revised and enlarged. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street, 1901. (Price, $1.50 net.)

This very excellent hand-book contains the essentials of bacteriology presented in a form suited to class-room and laboratory. The text is clear and direct, shorn of all that might be confusing or a hindrance to a ready grasping of the essentials of the matter under discussion. The book has been adopted as a text-book by many schools, and the revision, which has been thorough and painstaking, must needs increase its popularity. H.

Original Department.

PAPERS for the Original Department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

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Heredity.

By David W. Reid, M. D.,

JACKSONVILLE, ILL.

Read before the Jacksonville Medical Club.

EVERY child is the product of the ages. Its conception is the union of two convergent streams into one current of humanity. At the moment of conception, heredity, in its strictest sense, ends and environment begins.

In all study of the relation of parent and offspring, we notice two opposite tendencies: 1. A tendency to resemble the parents. 2. A tendency, equally strongly marked, to differ from the parent. Like begets like, we say, but like, in some unknown manner, also begets unlike. And it is this unlikenesses; these congenital variations from the parental standard, that form the starting point for new and wider departures, and, explain them as we may, bound up in these two tendencies, lies hidden as yet, the truth concerning the doctrine of organic evolution. It is this that gives interest to any theory that promises to throw light upon the subject of heredity.

Since every child, then, not only resembles its parents, but differs in many respects from both of them, and as part of the parental characters are hereditary, and part acquired, the question arises, just what kinds of characters are transmissible?

It is clear that every child has at birth, all the hereditary characters he will ever possess. Few of these are in evidence as yet. Some will de-

velop in childhood, some at puberty, some in middle life, and some in old age. But they will develop; they will not be created. It is equally certain that as the child grows, other characters will appear as the result of accident or of education— of environment. These are acquired characters.

For example: A child is born with very long arms. These are evidently inherited. A fall disables one arm and it fails to develop, from lack of use. The other, from extra use becomes larger and stronger than ordinary. These are acquired characters. The long arms are hereditary and may be transmitted to posterity; what about the unequal arms?

Every faculty can be developed by education—by use. Every character thus developed is plainly an acquired character. Now as hereditary characters are by definition hereditary, or inheritable, the only question remaining to be answered is, are acquired characters transmissible?

The popular belief is that they are. I say the popular belief. Briefly stated, the current theory of heredity held by those who have not followed the discussion of the last decade on this subject is as follows: At the moment of conception a new being is formed, partaking of the nature of both parents. Every conscious act of the father and mother previous to conception has had its bearing on the unborn child, building up through twenty or forty years, a heritage, mental, moral and physical, which is at that moment transmitted to the child, and that whereas the father's influence over the child, as far as heredity is concerned, ceases with conception, that of the mother continues through gestation, not only protecting and nourishing, but forming and influencing the child's character and disposition; moulding, in some mysterious way, the mental, moral and physical attributes of the child into conformity to her own prevailing moods and surroundings.

According to this theory, the child of five generations of musicians would probably inherit musical tastes and ability, not only because its forefathers were musicians, and chose musicians for their wives, but because that for five generations these ancestors had been training in mind and heart, in voice and hand; in ear and memory; that these acquired characters; these nimble fingers, these flexible vocal cords, these expansible lungs might be, in part, at least, transmitted to their posterity. This, we say, is the current theory. It was also the theory of Lamarck, of Darwin and of Spencer. According to this theory, not only twenty or forty years of effort and self-denial, or the opposite on the part of the parents go to the make-up of every child, but twenty or forty generations, or a thousand, of human endeavor, have left their imprint for good or ill upon its mind or body.

What is known as the Weissmann theory of heredity flatly controverts this position, and holds that acquired characters are never transmissible from parent to offspring. On the other hand, the inborn traits of the parent are inherited by the child, independent of their culture or development on the part of the parent. A child may inherit a talent for music, yet never know it. Still he may transmit this character as fully as his brother or sister, who has by years of study developed skill and reputation as a musician. For this reason it has always been considered necessary, in in-

vestigating the family history of any one, to take into consideration not only the parents and grandparents, but the uncles and aunts. Few of us develop the best—or the worst—that is in us.

Imagine twin brothers exactly alike at birth. Here they separate. A's lot surrounds him with refinement and culture, polite society, a college education. B's lot is the opposite; low associations; no refinement. Thrust upon his own resources, but with his brother's innate ability and ambition to excel, he discovers not his mental but his physical superiority over his fellows, and cultivates that. The result is a prize-fighter. The inherited characters of these men are supposedly equal; their acquired characters almost opposite; yet, according to our present theory, other things being equal, A's offspring will have no advantage over B's in point of intellect, nor will B's offspring inherit one iota of the muscular ability; the pugilistic dexterity of his father, or be handicapped by his base surroundings, his low motives and his brutalizing tendencies, except as these characters are family traits, inherited alike by the fathers of both children.

Again, a trotting stallion begets a number of colts his first season. His owner, knowing there is a strain of pacing blood in him, thinks he can make a better record as a pacer. He is put in training and for five years is never allowed to trot, and makes a record as a pacer. His training has not affected his inheritance. His later colts have no greater tendency to pace than his earlier. His five years of training count for nothing as a breeder, except to show what was in him from the beginning, and what may be expected of his progeny. The tendency to pace in this case was inherited, and inheritable. The development of the muscles and the pacing habit, acquired and uninheritable.

The belief is quite general that an acquired taste for alcohol, for gambling, for art or literature, may be transmitted to later offspring while not affecting earlier progeny. But according to our theory, this cannot be true. We frequently hear of women devoting their whole attention to art or music during gestation in order to impress the coming child in these directions. If the mother have a taste for art, and be permitted to indulge the same, she will be thereby happier and healthier, and therefore a better mother. If the child in turn develop a taste for art, or literature or music, the circumstance is noted. Otherwise it is forgotten.

The importance of this subject is seen when we consider that it involves the whole law of progress. It explains not the fact, but the method of evolution. Scientists are agreed that all present forms of life are descended from pre-existent forms through certain inheritable variations, and the survival of those variations best fitted to the environment of the individual. The subject in dispute is as to what causes these variations, and as to what kind of variations are inherited. Early in the last century, Lamarck advanced the theory that by use any animal could strengthen and enlarge any part, while from disuse, the part would diminish in size and efficiency. Lamarck assumed that these acquired characters could be inherited by subsequent generations. Later, Darwin admitted certain evolutionary effects of use and disuse, but held that they were subsidiary to what he termed Natural Selection. Darwin, however, took a step in the

direction of the Weissmann theory when he noted that contrary to what might be expected from the doctrine of non-use, mutilations are never inherited. Generations of detailed sheep or dehorned cattle do not reproduce these acquired characters. But the moment a calf was born with congenital absence of potential horns, we had therein the basis of a new breed of hornless cattle, breeding after their kind.

The question of heredity involves that of parental influence. Holmes' brilliant assertion that a child's education should begin a hundred years before it is born, according to our theory, is based upon a misconception. The same may be said of his story of Elsie Venner. I think I may say that it is held by the best scientists today, that not only congenital deformities and malformations, but that all peculiarities and departures from the ancestral type, mental and physical, are unaccountable, as yet, variations that play a large part in the process of evolution, but bear no, thus far discovered, relation to anything the mother has ever seen or heard or thought or felt or done during gestation.

In Tristam Shandy, we read an argument to prove from a legal standpoint that the mother is no relation to the child, serving only as an incubator and nurse for the development of the male sperm cell. A later theory holds that the male element in plants and animals merely fertilizes the ovum, and acts as a secondary element in reproduction. The present theory is that conception is the union of two equally important elements, and that from the moment of conception the mother's influence over the fetus is no greater than that of the father as far as heredity is concerned, but is limited to food and shelter. This theory denies the possiblity of the mother's influencing in even the slightest degree either the mental, moral or physical attributes of the child in utero, except in the matter of nourishment and protection.

This theory effectually disposes of the subject of "birth-marks." Birth-marks are unaccountable, at present, variations from the parental standard, and range, in all degrees from a simple pigmentation of the skin, to the most hideous monstrosities ever exhibited or described. These variations are inheritable, and present forms of animal life are the resultant of all variations found useful to the individual in the struggle for existence, and while they play a prominent part in the field of evolution, biologists at the present day hold that they cannot be accounted for by "impressions" upon the mother. But the new theory goes farther than the individual and demands a modification of our views concerning the effects of civilization and education upon the race. What a man learns is an acquired character, and cannot be transmitted by inheritance, nor can increased mental power or skill or muscular strength. Civilization is but another name for education on a large scale. Hence, neither civilization nor the effects of the same can be transmitted. Therefore, civilization, while changing man's surroundings, does nothing to change the man. All our knowledge, individual and racial, accumulated through centuries; our books and instruments; our institutions and traditions; our science and art are but tools, and if these could all be swept away in a moment, together with all recollection of the same, and man left with all his facul-

ties except memory of the past intact, he would immediately relapse into a state of savagery, nay, cannibalism, from which it would take him ages and ages to emerge. According to our theory, the present generation has no inherited tendency toward the knowledge and use of steam and electricity, or even language. These are the externals; the heritage, it is true, of the present generation, but in the sense of inheritance as property, and not in the sense of heredity.

Since acquired characters cannot be transmitted, what shall we say about the higher education of women? Raising the standard of motherhood by education? Doubling the inheritance of the children by giving them educated mothers as well as fathers? Here again we clash with old and settled opinions. If by education we make better mothers; mothers that will rear a larger proportion of healthy sons and daughters, physically, mentally and morally than before, we improve the race thereby. But in so far as education makes women more difficult to mate; raises the marriageable age; increases the years of unmarried life; makes motherhood distasteful and home cares irksome; withdraws from the field of early marriage the best talents, the greatest energy, often the largest souled, most motherly women in our land, to administer, as teachers, nurses, physicians and in a thousand other ways, to the offspring of others instead of adding their own rich life's blood to the current of the race, in so far, I say, as education does this, whatever it may do for the individual, it is a detriment to the race.

Like war among men, college education among women, no matter what may be gained thereby, will, by withdrawing from marriage the flower of young womanhood at the most active period of reproduction, tend toward a survival of the unfit, since what is gained to the individual cannot be transmitted to posterity, and what is lost to the race can never be regained.

As acquired good cannot be inherited, no more can acquired evil. "In Adam's fall we sinned all," is contrary to this theory of heredity. If Adam and Eve were created holy, sin in all its phases was an acquired character. No amount of sin on their part could cause sin to be transmitted to their posterity.

Each man's power for good or evil upon the human race throughout all generation is limited to the choice of the woman who is to be the mother of his children. The direct influence of childless Newton, or a Washington upon the race would be less than that of the sturdy farmer with his seven sons who never heard of the law of gravitation or the Declaration of Independence. The mental progeny of one man may alter the surroundings, but can never change the individuality of the physical progeny of another man. The life he leads, the discoveries he makes, the character he builds, the wealth he accumulates—or destroys—are a part of each man's legacy to the world, but they are the externals; the acquirable, the transferable, negotiable, overcomable environments; as distinguished from the innate, the essential; the constitutional, the unalterable.

What then? Can I no longer, by taking thought, by earnest endeavor, by years of labor and self-denial, by building up for myself a life of sobri-

ety and healthy habit, hope to perpetuate the same in my unborn child? Hope to smooth to some slight extent the rugged path he is to tread? To transmit to him in part, that for which I have labored so long and have counted as more than gold or silver? Yes, knowing that he will be largely what I was, I may hope to be able to make him largely what I am. I may surround him with the implements of success. I may set for him an example worthy of his imitation. I may give him an education that cannot fail to modify the whole current of his thought. I may give him social advantages that years of independent endeavor might fail to secure for him. On the other hand, I may so live that his little eyes may open upon a world of shame and misery; of vice and wretchedness. His first budding social aspirations may be overgrown with the rank weeds of a parent's iniquity, and the very air that he breathes may reek with the foul odors of a father's memory.

So much I may do for my child's inheritance; I may enrich it enormously, or mortgage it immeasurably, but the inheritance itself is beyond my reach. Nature herself holds that in entailment for him and his throughout all generations. I can mar it or blight it, but can never disinherit him. The inheritance *per se* I hold for him and his, not while I live, but simply to the first moment when he begins to live, and ten generations hence, or a thousand, will be transmitted to his posterity, the inheritance that was left to me, unchanged, if not unmodified, by anything that he or I may ever do, or say or think or suffer.

This is the inevitable conclusion from the premises of Weissmann's theory of heredity. I have no room for his arguments in support of this theory. Certain modifications have more recently been admitted by the adherents of this theory, but they effect rather the question of evolution than of heredity.

Of course the theory has its opponents. Every foot of the ground has been fought over. One of the strongest arguments against the theory; an argument urged both by Darwin and Spencer, was the supposedly well-known inheritability of tuberculosis, a belief no longer held by the medical profession. Aside from this theory the medical profession holds that while the germs of tuberculosis, of syphilis and other diseases may traverse the placenta, and infect the fetus, the latter cannot inherit disease in a strict sense of the term. Congenital disease is acquired, not inherited, from the mother.

This is not a controversial article. I merely desire to state clearly the theory of heredity held by advanced thinkers of today; show wherein it differs radically from that held less than twenty years ago, and to show the revolution in thought that follows its acceptance.

Given a firm belief on the part of writers and teachers for generations that acquired characters in the parent produce like characters for good or evil in the offspring, and it is no wonder that multitudinous examples will present themselves, especially to the great army of moral teachers ever on the alert for illustrations to prove the beneficence of virtue and the disastrous consequences of a sinful life even to the third and fourth generations.

Usually it requires a generation to establish an important theory, no matter how well attested by facts. We do not like to disinherit cherished

opinions and adopt new ones. The bias of thought and of interest in each generation of writers is toward upholding the old and fighting the new. Where powerful vested interests are arranged against it, it may take a century instead of a generation.

If this theory is finally established, and I think that in a modified form it is in line with the best thought of the present day, it may be considered the most important contribution to the theory of evolution since the appearance of the "Origin of Species." It is another answer to the question, How is evolution carried on?

The Death-Rate of the Rich and the Poor.

By Wm. Wormley, M. D.,

PHILADELPHIA.

DRYSDALE, of London, who has been an authority on this subject, has endeavored to insist upon and elucidate the point, that the grand cause of the non-improvement of our mortality resides in poverty and consequent ignorance, which is now, as it always must have been, the main cause of premature death, in all settled and civilized states. Villerme, the distinguished Parisian physician, and his able collaborateurs, in the Journal d'Hygiene Publique, have also contributed some valuable facts to this argument. Thus, in France, it has been observed that persons between the age of 40 and 45, die, if in easy circumstances, in the proportion of 8.3 per 1000, whilst if poor they died at the rate of 18.7; that is two and a half as many poor as rich die at these ages. It was found, too, that in Paris one inhabitant in 15 in the 12th arrondissement, which, is the Quartier Latin, and is peopled in great part by the poor, died whilst but one death in 65 took place in the 2d arrondissement, chiefly inhabited by the richer classes. Garnier mentions that in 1857 the mean life in certain quarters in Manchester as only 17 years, whilst that of other quarters of the city, then most unhgyienic, as 42 years; and Villerme found, some thirty years ago, that the probable life of the infant of a weaver at Mulhouse was so low as only one and one-half years, while that of the child of the manufacturing class of that city ran up to 26 years.

The great signal advance of the past three or four centuries has been the lowering of the death-rate in European states. In the town of Geneva, as pointed out by Drysdale in the sixteenth century, the probability of life, or the age to which half of the population born lived, did not exceed 5 years, whilst the mean life was $18\frac{1}{2}$ years. In the eighteenth century these figures had risen to $27\frac{1}{2}$ years for the probability of life, while the mean of life had advanced to $32\frac{1}{5}$ years. England has had a rapid fall in the death-rate during the earlier decades of this century; but Drysdale confesses, that for the last thirty or forty years there has been no very perceptible fall in the mortality, and this in spite of the fact, that at no pre-

vious period in the history of the nation has there been such an amount of capital, labor, and intelligence expended on the drainage and scientific purification of our cities. Taking London as a sample, with all the advances recently made in this wonderfully healthy city, the death-rate has been about 22.2 per 1000 since 1856. All England and Wales was identically the same, namely, 22.35 per 1000 in each of the decades, 1841-50-60, 1861-70, and 1871-1880.

Ansell, actuary of the National Assurance Company, some years ago, collected information through circulars sent out, concerning no less than 48,044 children of the well-to-do classes in England, including members of the legal, clerical, and medical professions, and the nobility and gentry, publishing his remarkable work, entitled "Statistics of Families of the Upper and Professional Classes." In the first year of infantile life, only 80.45 per 1000 deaths occur among the children of the richer classes in England, while in the Registrar-General report it is found that about 150 per 1000 die in the general population of England; that rate rises to 188 per 1000 in Liverpool. The death-rate among the most indigent classes in the large English towns is often three or four times, in the first year of life, over that of children of parents in good circumstances. In Germany, Stille, of Hanover, in an article on the infantile death-rate in some cities in Germany, shows that the rate is occasionally as high as 500 per 1000 in Berlin, a city in which the poverty of the worst-paid classes is marked.

Ansell's figures show that from 1 to 5 there are 46.84 deaths per 1000 among the children of the richer classes in this country, as against 113.69 for the children of the general population.

Of 100,000 births among the easier classes there are 80,000 survivors at the age of 21, as against 65,750 among the poorer classes. These tables also show that among the richer classes, between 40 and 60, 147.74 per 1000 die, as against 168.76 of these ages in the general population, is shown by the Registrar-General's reports. The mean age at death among the richer classes in Ansell's tables appear to be 55 years at present, an estimate a good deal higher than that already quoted from the report of the Sanitary Commission, which was 44. His tables also show that of 100,000 children born among the well-to-do, 53,398 survived at the age of 60, while in Farr's tables only 36,983 attained that age.

Looking at Ansell's statements in another light it shows the importance of selecting parents in comfortable circumstances, for in the year 1873, there died in England and Wales 368,179 persons under the age of 60; Ansell calculates that if the mortality among the general population had been only what it was in the upper classes, 226,040 would have died. So that apparently in one year poverty, or its concomitant features, destroyed 142,130 lives in England and Wales alone.

New Zealand, which is furnishing us some remarkable new features of social life is interesting in this regard also. The wages of labor and the profit of capital have been for some years very high in that country, while the price of butcher meat was only six cents a pound, and hence the most labor unskilled agricultural was able to secure plenty of food, clothing and shelter for himself and family. As a result there was the amazingly low

death-rate of only 12½ per 1000. This is, of course, a little misleading for the absence of an indigent or badly paid class in that new colony was supplemented by the fact that it was to a certain extent a selected population sent over the sea, yet had England and Wales that death-rate, some 200,000 lives would be saved each year.

Alcohol is ascribed as the greatest cause of most of our evils in this country, yet there is a little exaggerating of a useful truth, for the New Zealand laborer partakes of as much or more of his so-called luxury at the antipodes as he did when at home, and yet he lives nearly twice as long as he would in England.

Alexander Bain, in studying the Constituents of Happiness, makes the following remark, which the statistics cited amply verify: "That prime requisite, health, is very imperfectly secured in the lowest grades even of respectable citizenship. The public registers have demonstrated that mortality and disease diminish with every rise in the scale of wealth." While an able writer of hygiene, M. D'Epine, remarks in the Annales d' Hygiene, that the so-called mortality of several trades is "only another name for poverty." Thouvenin, in an article on "The Influence of Trade on Health," believes that with the exception of cotton-beating, dividing and carding of silk cocoons, or white lead grinding, and one or two other such trades, industrial pursuits do not exercise any especially injurious effects on the workman's health. He finds the deterioration of the health of the wage classes in towns, and their greater death-rate to be due to defects in their dwellings, to hereditary and skin diseases, to venereal and tubercular diseases, to the excess of premature toil, and the scantiness and bad quality of their diet, the irregularity of their lives while still immature, and, lastly, to a certain extent, to dissipation. In the North London Consumption Hospital tubercular diseases form 68 per 1000 of all the deaths among the richer classes, no less than 230 per 1000 of the poor die of these diseases so often caused by malnutrition during childhood. In his essay on the "Food of the Laboring Classes," Dr. Edward Smith stated as the result of his laborious inquiries that the food of the workers in silk was found to cost per head only 2s. 7½d.; and of stocking-weavers, 2s. 6½d. He sums up by saying: "No class under inquiry exhibited a high degree of health. The least healthy are the kid-glovers, needle-women, and Spitalfield weavers. The average amount of food was too little for health and strength." Poverty, proved by these figures, is the main factor of premature death in European countries, at least.

If the lesson thus reached is the truth that we desire to lower the death-rate in any notable degree in America, we must no longer content ourselves with drainage schemes or charitable plans for building model houses for a few. To permanently lessen the death-rate it is necessary to lessen that poverty which meets us face to face at every turn, even in our weathiest States.

Diminished agricultural powers are the real cause of the difference in the remuneration for labor and the cost of butcher meat in England and New Zealand. Thus, although the birth-rate in New Zealand is at present 41 per 1000, as compared with 36 per 1000 in England, and 26 per

1000 in France, the death-rate is not much more than one half what it is here. Drysdale argues that if we were to lessen the birth rate in England down to the rate in France, continuing the present emigration, the price of provisions would ere long be as low here as in the newest colony. England's death-rate would then rapidly sink, and might eventually be as low as 12 per 1000, which is already the normal death-rate among the well-fed and well-housed classes in England. His argument is that the farm is overstocked with human animals, that this is the real cause of the permanent death-rate of the cities; and that so long as the population of England and Wales and the United Kingdom, continue to add to themselves as great an increase as of late years, it is useless to expect much from drainage schemes or the other departments of public hygiene. Slums will always exist so long as people have low wages, and cannot afford large houses in which to lodge their numerous progeny which is so universally met with among the poorer classes in the United Kingdom. For, in almost all countries, the fecundity of the poorer classes is very much greater than that of the rich. In Paris, for instance, according to the Statistics of European Population, the births are but one-thirty-second of the population in the rich, whilst in the poor quarters they rise to one-twenty-sixth. The poorer classes being less educated, are always less prudent, more instinctive, and consequently are cut off in what in modern scientific jargon has been styled the "struggle for existence," a struggle which, however, interesting it may be to contemplate among other races, is contrary to all the instincts of true christianity.

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On to Saratoga.—Join the Missouri Valley Excursion to the A. M. A. at Saratoga Springs, June 10 to 13, and save money on your railway fare and hotel bill Address Dr. Chas. Wood Fassett, St. Joseph, Mo., or Dr. J. C. Waterman, Council Bluffs, Iowa.

New York's Foreign Population.— The foreign population of New York City includes 1,230,000 from Europe, of whom 275,102 are from Ireland, 322,343 from Germany, 145,433 from Italy, and 155,201 from Russia. There are 6077 Chinese, 311 Japanese, 1401 Turks, and 1175 other Asiatics, 32,873 Poles, 31,516 Hungarians, 15,055 Bohemians, 10,499 Roumanians, 1491 Spaniards, 14,755 French, 1221 Belgians, 2608 Dutch, 28,320 Sewdes, 5,261 Danes, 21,924 Canadians, and 71,427 Austrians.

The Separating of the Hindoo Twins.—The Hindoo twns, Radica and Doodica, united in a manner similar to the Siamese twins, who have been exhibited throughout the world, were separated by operation February 9, in Paris, at the clinic of Professor Doyen. The operation lasted twenty minutes, and was seemingly successful. The operation was undertaken because one of the twins, Doodica, was severely ill, her ailment being tubercular. Radica was also slightly affected. Since the operation Doodica has died, but her sister is rapidly recovering.

Relations and Treatment of Suppuration of the Middle Ear.

By A. E. Prince, M. D.,

SPRINGFIELD, ILL.

Read before Brainard District Medical Society at Lincoln, October 24, 1901.

Continued from page 225.

SOURCE OF THE INFECTION.

In by far the greater portion of cases of suppuration of the middle ear, the infection enters by way of the Eustachian tube. This is very frequent in children, especially when associated with la grippe and the exanthemata. The middle ear may be infected through a perforation of the drum membrane, but this is less common. I have seen several cases of suppuration of the middle ear due to the introduction of a foreign body in the meatus.

In one case a chronic suppuration of a very offensive character developed seven years ago, after the introduction of a pebble. Suppuration with an unendurable odor continued from that time, and resisted every remedy until a radical mastoid operation was performed, and the antrum and cells were obliterated.

The advent of la grippe has greatly increased the number of obstinate chronic offensive otorrhea.

It is likely that the staphylococcus and streptococcus often invade the tympanum, occasion otalgia, and subside without perforation. When perforation does not occur, we are prone to call the case catarrhal.

The various forms of aspergilius may develop, in the meatus, and cause a general meningitis, resulting in perforation and general mastoid infection. Insects may be responsible for the same condition. Furuncles in the posterior wall of the meatus may result in an infection of the mastoid cells.

TREATMENT OF ACUTE SUPPURATION.

The treatment of acute suppuration, or the inflammation previous to suppuration is very important to the general practitioner, for these cases almost always fall into his hands during the acute stage and a timely application of appropriate remedies will, in the majority of cases, yield good results.

Although not found in the text-books, I will venture the assertion that the remedy first in importance is atropine (alkaloid) dissolved in castor oil.

The practice followed at present in at least ninety per cent of acute tympanitis, is the introduction of sweet oil and laudanum. I could never understand the mental operation which leads a physician to employ opium in the ear, for it is not absorbed to any extent, and if my knowledge is correct, opium must exercise its influence on the brain center. It is my opinion that the benefit from laudanum and oil is due to the oil, the ameliorating virtue of which is due to the fact of its being used in the ear

warm. I would therefore omit the opium, and if needed, would use it hypodermically.

The virtue of the oil is greatly enhanced by the addition of atropia which acts locally. (Bear in mind that the sulphate will not dissolve in oil, and that the alkaloid must be employed.)

My experience with atropia in the treatment of middle ear inflammation dates back about ten years to a patient who was in the sanitarium at the time he developed an acute and exceedingly painful inaflmmation of the drum. I had a one per cent solution of atropia alkaloid dissolved in oil. ricini, which I very often employed in the treatment of iritis.

I decided it would be rational to use this oil solution, because by using the oil the atropia would be carried into the drum cavity, which could not be accomplished by a watery solution of the sulphate.

Accordingly I commenced using the warm oil solution,. The result was like magic. In a short time the pain had subsided, and did not recur. Since that time this remedy has given such satisfaction that during the past eight years I have recommended it as routine treatment in mastoiditis with dry heat, for acute inflammation of the middle ear.

It is fortified with dry heat, either applied by means of hot water or salt bag. In the majority of cases when used at the onset it will control the inflammation, and prevent perforation. In some cases in which an idiocyncrasy exists, sufficient atropia, when used in this way, will enter the system, and produce constitutional effects. In small children I usually employ a half per cent solution.

I trust that in your hands it may be given a trial, and I hope that your observation may accord with my experience.

Should atropia and heat fail, it is probable that suppuration has taken place. That being the case, a perforation will probably take place either spontaneously or after a timely paracentesis.

SPONTANEOUS PERFORATION.

In case the pain is not relieved in the lapse of twenty-four hours, I unreservedly recommend the making of an incision in the drum membrane.

PARACENTESIS OF THE DRUM MEMBRANE.

This is rendered urgent by the fact that confined pus means continued pressure and pressure means strangulation, so that after a prolonged and uninterrupted period of suffering, the entire drum membrane may be destroyed, together with injury to the structures of the middle and internal ear.

When scarlatina or la grippe, and often when measles and even when cold are the exciting causes, and the membrane is very resistant, the mucous membrane may slough, and the consequent cicatrization may cause permanent impairment of hearing. It is well to bear in mind that the perforation, or even loss of a considerable portion of the membrane with permanent perforation may not materially impair hearing, but the loss of the mucous membrane of the tympanic cavity may be irreparable.

With this thought in mind, the physician may not hesitate to undertake a paracentesis, if, upon his second visit the pain is found to persist.

OPERATION.

There are two ways of performing this operation. The first is that of the otologist, who has all the advantage furnished by the possession of instruments, facilities and experience which are usually not possessed by the family physician. An attempt to follow the rules laid down in the text-book, will discourage the average physician and prevent the operation being done in ninety per cent of the cases where the operation would be indicated.

I will endeavor to describe a simple operation which may safely be done, and which no physician, unaided by an assistant, need to hesitate undertake.

Correct understanding regarding the relation of all the parts of the middle and internal ear is desirable, but it is not essential to enable one called in an emergency, to relieve suffering.

Nature has so located the vulnerable parts, viz., the fenestrae, that they are even more safely situated than the tendons of Achilles.

The fenestrum ovale is situated in the superior posterior angle of the tympanic cavity, and lodges the foot of the stapes. The fenestrum rotundum is situated below the former, and in the posterior quadrant of the inner tympanic wall. These are the only vulnerable points in the ear. They cannot be punctured except by inclining the handle of the knife downward and forward. If the physician will follow this simple guide, and if he will practice this procedure according to the following suggestions in every case where an operation is indicated, he will merit the thanks of every suffering patient.

1st. Sterilize the meatus. About the best way in my opinion is to use pyrozone, and syringe with warm alkaline solution of sublimate 1:1000. Dry gently with cotton, and apply sublimated vaseline to the walls of the meatus.

2d. Anesthetic. The membrane cannot be anesthetized by means of an aqueous solution of cocaine, but the alkaloid may be dissolved in oil, a saturated solution of which will doubtfully anesthetize the membrane, owing to the inflamed state. To Dr. Gray, of Glasgow, is attributed the following: Cocaine hydrochlorate, 10 per cent, in equal parts of analin oil and rectified spirit. Almost complete anaesthesia may be obtained by installation into the meatus.

In former years I have usually employed the primary anesthetic effect of ethyl bromide or chloroform.

To obtain this, the patient is placed in a position favorable for this operation, and required to breathe rapidly and deeply; the cone or funnel of an Esmarch inhaler, having been saturated with the agent. Thirty or sixty seconds suffice to obtain complete anesthesia.

It is well to instruct the patient as to the method of breathing by requiring him to inhale and exhale deeply and rapidly with the cone over the nose before saturating the cone. If this is done, the proper kind of respiration will be secured, which will prevent a disappointment.

The ethyl bromide is the better agent, as it effects are more prolonged, but I have used chloroform in this manner a great many times, and when

the characteristic respiration is secured, the result leaves nothing to be desired. The primary anesthesia of ethyl bromide is more prolonged than that of chloroform.

The best instrument for making a paracentesis is a Graefe cataract knife. The amateur might protect the blade excepting 3 mm. near the point, with isinglass plaster. An incision should be made in the middle of the anterior portion of the membrane, and carried downward and backward, following the course of the meatus. This will secure good drainage, and instantly relieve the pain, provided the serum or pus may not be retained in the antrum or mastoid cells. In case the observer distinguishes a swelling or tumefaction projecting into the meatus supra-posteriorly, it is an indication that the antrum may be infected. In that case, an incision in the upper and posterior portion is reommended by no less authority than Dench, in a paper read at the recent meeting of the American Medical Association at St. Paul, but I do not favor this practice or recommend the incision, which might result in a perforation of one of the fenestrae, and lead to the possible loss or infection of the labyrinthine fluid. In such a case I counsel the aforesaid incision, and then turn the blade so as to make an incision down to the bone along the superior-posterior aspect of the meatus, commencing the incision close to the drum membrane.

Should pain remain after incising this membrane, it is evidence that liquid is confined in the antrum by the impervious condition of the infundlbulum. It would be a good practice in this event to instill a few drops of chloride of adrenalin, and facilitate its entrance into the tympanic cavity by churning it with cotton on an applicator.

If the pain is not relieved by this procedure, it is well to regard the case as exceedingly perilous, and seek the advice of an aural surgeon.

I feel like repeating here a statement made by an eminent surgeon, to the effect that the average physician would serve humanity better by the study of paracentesis of the membrane tympani than by any of the major operations.

The physician is called, and decides that it should be done. If he depends upon a consultation, the patient will not derive the benefit at the proper time. In most cases the burden of a consultation will lead to postponement until the next visit, when the drum may have been permanently injured. The postponement made necessary by consultation may jeopardize the essential structures of the drum, or may lead to an invasion of the mastoid cells or brain.

Specialists are not very good emergency doctors. They do not leave the office during office hours, and out of office hours may not be readily found.

The operation is an emergency procedure, and every physician in general practice should make himself competent to perform it.

Pain unrelieved by paracentesis. When the pain in the ear, or in any direction from the ear, which is believed to be due to confined pus, is not relieved by an incision in the drum, the presumption is that the pus is confined in some of the cells of the mastoid, or may have perforated the tegmen and produced meningitis, the pain of which is not always easily distinguished from that of mastoid pressure.

This is the class of cases that too often die of meningitis; the pyogenic etiology of which has up to this time been sadly overlooked.

Often, after a few hours of suffering, the patient gets relief, to be followed by the advent of an extradural abscess.

I cannot urge you too strongly at this point to contemplate this structure.

This condition may develop in the course of an acute infection, and easily deceive the physician (as in Conkling's case), or it may develop in the course of a chronic discharge in which case there is no excuse for an error in diagnosis. I cannot better impress the situation on your minds than by giving a brief report of two cases, one of which refused the operation and died; while the other recovered.

Mr. McF. called on me several years ago, suffering great pain. For twelve years he had experienced more or less trouble from an offensive discharge from the ear. When the flow was free he did not suffer, but when the flow was scanty, he suffered more. Several times at long intervals he had suffered intensely for a short period, but the re-establishment of the discharge had always given relief. On this occasion the discharge had ceased twelve hours before, and the pain had been intolerable, and was getting worse.

An examination revealed a polypus projecting through a perforation in the membrane tympani. I told him that the polypus had its origin in an abscess cavity, and acted like a valve to prevent the escape of pus. The pressure might dislodge it as it had done before, but unless that occurred, the pressure would force a passage into the cranial cavity, or into the adjoining cells of the mastoid. My patient was prejudiced against an operation, and too crazy with pain to reason on the subject, even if he had had the faculty. When I suggested making an operation, he turned and left the office with the words, "I don't want nobody cutting about my ears." He went to a physician who ignored pathology, and limited himself to symptom remedies, and enjoyed a great reputation. He had had forty-nine cases of diphtheria, and had never lost one, while all the other doctors in the town had not seen a dozen cases. He did not favor operations, and on this account was often consulted by those prejudiced against surgery.

In the case of Mr. McF. the indication was plain. A hypodermic relieved the pain; an antipyretic and diaphoretic was given for the fever. Before bedtime he had a severe rigor, for which quinine was given. In the morning he received a laxative and diuretic. For the contracted pupil of cerebral irritation, he received belladonna; for the subsequent dilatation of pressure he received physostigmine; for stupor he received a stimulant; for convulsions he received an anti-spasmodic, and for death, a coffin.

The second case was that of Mrs. Robertson, of Tallula, seventy-five years of age, wife of a doctor, and mother-in-law of another.

Lagrippe had prostrated her, and was followed by an acute middle ear infection which perforated the tympanum, and discharged for nine weeks. She suffered almost continuously, although there was an uninterrupted discharge, which acted as a vent, and prevented a fatal termination. Her

condition was understood, and an operation contemplated, but her age and feeble condition led her husband and son-in-law who were both physicians to fear the result of an operation. They hoped she would grow more comfortable in time, and at last the hoped for period came. Pain vanished, and she was easy. This soon proved a disappointing symptom in her case, for brain symptoms set in; nausea and vomiting were soon followed by paralysis on the opposite side, and dilated pupil on the corresponding side.

Responding to a telegram, I found the patient in the above condition. The relatives who knew the import of these symptoms were without hope. Encouraged to believe, by the absence of high temperature, that the dura mater was not perforated, I determined to make an effort to drain the pus from the middle cranial cavity, the escape into which I held accountable for the symptoms which presented. A radical mastoid operation was done, and the tegmen found to be perforated. An unusually large amount of pus continued to gather in the mastoid wound, and on the following day the symptoms of paralysis disappeared, and the pupil contracted. The antrum was kept packed with gauze until it was obliterated by the development of granulations and the organization of fibrous tissue.

The brilliantly fortunate issue of this case is to be contrasted by the lamentable exodus of the former. Both serve to fix in your minds the possible result unless the physician and surgeon associate good judgment with prompt execution.

MEDICAL TREATMENT—CHRONIC SUPPURATION WITHOUT PAIN.

Although in the practice of the busy practitioner, the occurrence of painful suppuration of the middle ear which calls for prompt action, is by no means rare, yet he is still more frequently called upon to treat the condition of chronic suppurative otitis media.

Up to the present, the condition may rightly have been considered the opprobrium of otology.

The myriads of cases of chronic offensive suppuration which have been treated in vain, many of which have gone to their grave from meningitis, have forced the lay public to consider this disease as well nigh incurable, and led the otologist to give a guarded prognosis. Many of these cases are cured by medical treatment, some relapse, and others are not benefited.

In handling these cases successfully it is necessary to form a clear conception regarding the pathological condition which prevails. The classification which I here offer is simply designed to aid the physician in arriving at a conclusion regarding the measure of probability of his effecting a cure.

In the first class the discharge is chronic, and escapes through a very small opening in the membrane. The chronicity of the discharge indicates the probability of the existence of granulations, necrosis or empyemia of one or more cells, the retention of pus in which, and the decomposition of the same prevents recovery, and a constant source of re-infection.

In these cases it is not likely that medical treatment will accomplish anything. Local remedies cannot be made to enter the drum cavity, owing to the fact that the cavity is already full of pus, hence the best course is to recognize at once the futility of medical treatment.

In the second class the discharge is chronic, and escapes through a large opening in the membrane. It may or may not be offensive. It may or may not be colored.

If the pus is not or has not been profuse, the entire process may be limited to the drum cavity, and be cured by a germicidal line of treatment. If the pus is moderately abundant, it still may be due to polypi or granulation tissue in the drum or antrum, and be amenable to the employment of treatment calculated to shrink the granulations or polypi.

If it is not due to this cause, and is profuse, it is almost certainly due to a suppurative process in the antrum or cells, and still may be amenable to medical treatment calculated to reach the mastoid antrum.

If the pus is offensive, it may be due to the decomposition of pus in an inaccessible locality or in an accessible locality. If the decomposition is taking place in the tympanum, it can be controlled at once. If it is in the antrum, it can usually be controlled very promptly unless the passage to the antrum is anomalously small. If it is due to necrosis in the petrous bone, or involvement of the remote mastoid cells, it will probably not yield to medical efforts.

The pus may be limpid and clear, or of a yellow cast or turbid with blood or colored by bacilli or fungi.

If yellow, it is not characteristic, and probably due to one or more of the pyogenic organisms, staphylococci or streptococci. If green, the color is probably due to the bacilli pyocyaneous, which secrets a coloring matter that stians the bone, and is characteristic in postmortem examination.

If tinged with flakes of white or green or black, it may be provoked by one of the varieties of aspergilius, albus, glaucus or nigricans. In this case the remedy par excellence is campho-phenique. It can be dropped into the ear, and allowed to insinuate itself into the recesses of the drum until the germs have been destroyed. Without the knowledge of this variety, one would sometimes fall into a lamentable error which can easily be avoided by a little care.

In chronic suppuration of the middle ear not due to aspergilius or the other saprophitic organisms which are too rare to enter into the calculation, and when the tympanic cavity is accessible through a large perforation of the drum membrane, and the mastoid antrum presumably accessible through the infundibulum. I recommend the routine employment of the following remedies on rising and retiring:

℞ No. 1. Pyrozone, 2 oz. Sig. Drop in ear; churn with cotton; repeat three times, and finally dry with cotton.

℞ No. 2. Alcohol, 1 oz. Sig. Following No. 1, drop four m. in ear. After irritation ceases, fill meatus, and retain in ear ten minutes. Repeat twice.

℞ No 3. Enzymol, 1 oz. Dilute five minims with equal quantity of water. Following No. 2 drop in ear, churn, and remove excess with cotton.

Pyrozone removes pus; alcohol shrinks granulations, destroys germs, and kills polypoid cells. Enzymol digests and liquefies the devitalized tissue.

Re-infection is liable to occur, and this class of patients are sometimes susceptible to renewal of the discharge upon taking cold,. It is therefore wise to warn them of the possibility of subsequent attacks. The above is not offered as the only treatment. The books to which you have access will furnish you the full armamentarium.

A favorite powder is boric acid, acetanalid, each one drachm. M. Sig. Pack in ear after cleansing and drying.

You will probably get as good results from the above as from any treatment, as it meets the indications, but you will often be disappointed. Necrosis, or the inaccessibility of the effected cells, may demonstrate in a short time the futility of medical treatment. In such cases, a decision must be made between the danger of neglect and the risk attending a surgical operation for radical cure.

RADICAL OPERATION FOR INTRACTABLE OTORRHEA.

In closing this unavoidably long paper with a consideration of the radical operation for intractable otorrhea, I shall still consider myself as addressing the general practitioner, and endeavor to limit myself to the briefest consideration of the subject, which is one of the most important in surgery, and one which is just becoming recognized as a classic procedure.

Schwratze, Stache, Zaugfail, McEown, Jensen, and others have each done original work in the field of mastoid and tympanic surgery, and each may be considered as having given his name to a line of procedure which he may be presumed to have originated. But while the discussion of priority is going on, the practical operator who has any originality, is taking what he considers the best from each, and doing what is called by the generic name "The Radical Operation."

This means a mastoid operation by which the inaccessible foci of necrosis and suppuration are revealed and eradicated.

The opprobium medicorum of otology has been conquered. The offensive pus which stigmatizes a person, and taints a room, and often destroys companionship, which originates in the remote mastoid cells, and finds an outlet through tortuous passages, which lead into the drum, is drained to the surface, and the nidus obliterated. The invasion of the cranial cavity through the roof of the antrum and attic is made a thing of the past by means of the removal of the tissue, which acts as a barrier to the free escape from this cavity. The cavity itself is curetted, and caused to fill with granulations, which organize and eventually become covered by an extension of epithelium from the meatus which insures permanent drainage and freedom from danger. The cells which are often separated from the sigmoid sinus by such a thin wall that pus may break into the sinus, and cause meningitis, thrombosis or cerebral abscess, are followed to the limits, opened up, obliterated and their place is taken by connective tissue.

A description of the surgical procedure is not in place here, suffice to say that great improvement has been made of late in the simplification of the operation. The period requiring the attention of the otologist has

been reduced; frequently after a week the family physician takes charge of the case. The drainage into the external auditory meatus, and the immediate closure of the posterior wound secures a union by first intention, and prevents the pain and annoyance of a long, protracted healing, during which the posterior opening must be kept open until the antrum has filled. Direct drainage into the external auditory canal prevents constriction of the meatus, and leaves the cavity of the drum and mastoid open to inspection.

The radical operation takes the place of the unsatisfactory efforts to maintain a permanent opening in the drum, and it exposes polypi which often originate in crevices which are inaccessible through the tympanum.

Enough deaths have followed attempts to destroy polypi in the ear, either by curettement or caustics to make an opening. Not the least of the advantages of the radical operation is the assurance yon can give the patient that he will be no longer a prey to the absorption of pus from this cavity.

Besides the radical operation for the local condition pertaining to the ear, the cultivation of surgery of the mastoid opens up a field of usefulness for the surgeon, who, by making an incision into the cranial cavity through the tegmen or sigmoid groove, may liberate the pus of a meningitis or brain abscess.

At this point it is not easy to determine the dividing line between the field of the general surgeon and the aural surgeon.

It is certainly true that the surgeon should cultivate his knowledge of the mastoid so that he may avail himself of the advantages furnished by the antrum and attic, as the point of easier access to the brain for draining the middle fossa. To do this, he must know the exact location of the seventh nerve, carotid artery, and the various anomalies relative to the position of the sigmoid sinus and cerebral fossa. On the other hand, the aural surgeon who has made himself acquainted with the relation of the mastoid so that he could avoid involving the seventh nerve, brain and sigmoid sinus, while searching out the areas of necrosis and foci of suppuration, must cultivate his studies in the department of brain surgery sufficient to render him competent to trephine, at an unexpected moment search for an abscess, and, if found handle it intelligently.

The general practitioner must inform himself regarding the status of knowledge in this domain of thought. It is he who is usually required to bear the responsibility, and must always supply the balance wheel and guide the patient to a wise decision.

The successful operations on the mastoid have placed work in this department on a high plane. In acute cases an early operation is demanded, so soon as urgent symptoms are present. Each death from delay is an educator that fatality is the probable penalty of procrastination, until now few cases are lost in which the symptoms are plain.

The mass of the medical profession is not sufficiently awake regarding the radical operation for chronic suppuration and pyogenic meningitis, and it is with the hope that this paper may not serve as an additional soporific that it is submitted for your criticism.

DISEASES OF THE LUNGS AND PLEURA.*

A Series of Papers written expressly for this magazine, by

BY ALBERT ABRAMS, A. M., M. D. (Heidelberg),

SAN FRANCISCO, CAL.

Consulting Physician for Diseases of the Chest, Mt. Zion Hospital and the French Hospital

[CONTINUED FROM PAGE 25.]

BRONCHIECTASIS.

Etiology.—Dilatation of the bronchi, as this term implies, is usually a secondary affection. The commoner affections which conduce to such dilatation are, chronic and acute bronchitis, pulmonary tuberculosis and lung cirrhosis, although nearly every pulmonary disease may contribute toward its causation. The affection preponderates in the male sex. It may occur in all periods of life, being most common in adult life.

Morbid Anatomy.—The varieties of bronchiectasis are according to the form of dilatation, cylindrical and saccular. In both varieties, the medium sized tubes, as well as the smaller tubes and bronchioles are involved. The term *bronchiolectasis*, has been suggested by Kanthack to signify involvement of the bronchioles. In *size*, the dilated tube areas may vary from a hen's egg, or may be so small, that the microscope alone, will determine their presence. In *extent*, it is usual to find a large number of tubes involved in both lungs, and it is extremely rare to find the dilatations limited to a single lobe, or even to one lung. Bronchial dilatation may be congenital. In children after an attack of pertussis or pneumonia, the bronchial dilatation may be temporary, although it is usual for the dilatation to increase in size with succeeding years. In bronchiectasis, the lesion does not implicate the bronchial tissues alone, which necessarily diminish the resistance of the bronchial wall, but very often the associated lesions predominate in the adjacent lung tissue. The chief asssociated lesions are identified with the new formation of connective tissue, with subsequent development of induration (interstitial pneumonia), and with extensive areas of broncho-pneumonia. It is not uncommon, however, to find associated with dilated bronchi all kinds of lesions, including lung edema, emphysema and atelectasis. The dilated bronchi may ulcerate, and the resulting perforation may, by penetrating the pleura, cause pneumothorax. By penetrating the mediastinum, a subcutaneous emphysema may ensue. The retained secretions in the dilated bronchi may become putrid and, if ulceration of the bronchial mucosa coexists, septic infection may ensue. The septic matter may also implicate contiguous lung areas and septic pneumonia may supervene. With a chronic bronchiectasis we nearly always find circulatory disturbances, the result in part of a dilated

* The first paper of this series, on "Cough," appeared in our issue of August 25th, 1900, and the following have appeared in their order: "Pulmonary Atelectasis," "Relation of Respiratory Diseases to the Circulatory Apparatus and the Nervous System," "X-Ray Examination in Diseases of the Chest," "General Therapeutics of Pulmonary Diseases."

heart. The continuous and profuse discharge from the affected bronchial mucosa, also conduces to amyloid disease of the viscera. In considering the general mode of production of bronchiectasis, we have to deal with in trinsic and extrinsic causes. The intrinsic causes are resident in the bronchi, and in this connection, we are chiefly concerned with the effects of a chronic bronchitis, and bronchial obstruction. It is not difficult to conceive how the former affection may lead to dilatation. Chronic bronchitis favors dilatation by a destruction of elasticity and muscular tone of the bronchial tissues which coughing, retained and altered secretions accentuate. Bronchial obstruction is operative in many ways, chief of which are: changes in the bronchi and peribronchial tissues, which are no longer resistant to intrabronchial pressure, fibrous lung changes and retention of the secretions.

Among the extrinsic causes are lung collapse, pnuemonia, lung fibrosis and pleural changes. In lung fibrosis, the causes leading to bronchiectasis have been more definitely ascertained. Areas of fibrosis which are always tending to shrink, by traction on the bronchi, conduce to their dilatation. A pleural effusion by compression of the lung and the new formation of connective tisssue may lead to bronchial dilatation.

Diagnosis.—In the majority of casesa diagnosis of bronchiectasy is impossible. As a rule, there is a history of chronic bronchitis, or some other lung affection, which imperceptibly passes over into bronchiectasy. Two symptoms, cough and expectoration, are characteristic. The cough is paroxysmal, and may not occur oftener than once or twice a day, yet, the expectoration is so copious that as much as a pint, or even more, may be brought up in a day. The cough paroxysms are usually present in the morning, and the mere act of rising is sufficient to excite cough and expectoration. To facilitate expectoration, many patients adopt certain postures which are prompted, as a rule, by the fact, that definite postures best drain the dilated tubes. Owing to better drainage, dilated tubes situated in the apices and upper lobes induce less violent cough paroxysms, than if located in the lower lobes. The expectoration is diffluent and rarely mummulated. Allowed to stand in a conical glass, it separates into three layers; a thick granular layer below, a mucoid intervening layer, and an upper layer of brownish froth. The microscope demonstrates the presence of micro-organisms, pus cells, crystals of fatty acids, etc. Tubercle bacilli are absent, and likewise elastic fibres, unless ulceration of the bronchial wall is present. As a rule, the sputa are very offensive, and this fetid odor may be detected at some distance from the patient. It is for this reason, perhaps, more than any other, that the patient consults the physician. Any one who has come in contact with the fetid sputa of a patient with dilated bronchi knows the lingering, horrible sensation it produces. Very often the breath is more often tainted than the sputa. In recent cases of bronchial dilatation, no odor is imparted to the expectoration, as a rule. It is only in long standing cases, or when the contents of a dilated tube is with difficulty expelled that the sputa acquire the horrible fetid character, owing to putrefactive changes. Hemoptysis may occur from complications, or from bronchial ulceration extending to a neighboring branch of

the pulmonary artery. While the periodic expectoration of enormous quantities of sputa suggests bronchiectasis, the existence of the latter must be demonstrated, which is not always an easy matter. It is only when the bronchiectatic cavity is superficial that we obtain on percussion, a tympanitic or metallic tone which is higher in pitch when the mouth is open. If the bronchiectatic cavity is filled with secretion, the tone on percussion is absolutely dull, but resonanee, and even tympany may be suddenly obtained if a cough paroxysm succeeds in dislodging the retained secretions. If the lung surrounding the dilatation is emphysematous, the percussion note may be normal or hyper-resonant. If the peribronchial lung tissue is indurated, the percussion sound will be dull. The other physical signs are dependent on so many other complicating conditions, that only confusion often arises from their correct interpretation.

Differential Diagnosis.—Phthisical cavities may coexist with bronchial dilatation. The presence of tubercle bacilli in the sputum would suggest the former. Elastic fibres may be present in both conditions. In differential diagnosis, it is always wise to remember that sudden expectoration of large quantities of sputa minus the presence of tubercle bacilli is strongly suggestive of bronchiectasy. The presence or absence of fever is of no diagnostic import, as fever may attend simple bronchial dilatation. The previous history is important. Cavitation in phthisis is preceded by solidification in the affected area, which is not always the case in bronchial dilatation, unless the latter is caused by tuberculous lung conditions. A bronchiectatic does not as a rule develop in the locality common to phthisical cavities, viz., the apices; on the contrary, the most frequent situations for bronchial dilatations are in the middle and lower thirds of the lung posteriorly. Retraction of the chest wall and displacement of the impulse of the heart may be associated with simple bronchial dilatation.

A limited *empyema* which has perforated a bronchus, makes a differential diagnosis with bronchiectasis often impossible. Puncture with an aspirating needle would be of service in diagnosis, but the danger of conveying air or pus into the pleural cavity, if adhesions are absent, is always great. The history of the disease can alone be of service in diagnosis.

A *lung abscess* usually yields a purulent expectoration, which is without a fetid odor, and contains elastic fibres and other histologic lung elements.

Between a *chronic bronchial catarrh*, especially a *putrid bronchitis* and bronchiectasis, a differential diagnosis is often impossible, unless rales are persistently present in a definite lung area, or become consonant in consequence of an interstitial pneumonia. If the latter signs develop, they speak for bronchiectasis.

Prognosis.—Bronchiectasis is usually a chronic affection aggravated by weather changes. It is not inconsistent with an active life. Cases are on record where the disease has persisted for fifty years. The chief dangers are from complications such as septic pulmonary affections, gangrene, hemoptysis and cerebral abscess. It is customary to regard the latter affection as peculiar to bronchiectasis, but this is not the case. The de-

velopment of a brain abscess is a metastatic process and may complicate other lung affections in which pyogenic organisms play a role.

Treatment.—Here two objects must be borne in mind, viz., to diminish the bronchial secretion and prevent its putrefaction. The usual methods employed aim at the attainment of both objects. For the milder cases, inhalations and the balsamic preparations already referred to under general treatment are indicated. The most efficient methods are unquestionably the *creosote bath* (see general treatment) and intralaryngeal injections. The former method may, if persisted in for a sufficient length of time (six months or longer), yield results tantamount to a cure. If no diminution of the quantity of sputa results from the creosote baths, we are almost certain to correct the fetor of the sputa.

The benefit from the baths is not so pronounced in children as in adults. Intra-laryngeal injections must be made frequently to be of any service, but their employment postulates unusual dexterity, which is not the gift of the average practioner, who is, therefore, constrained to employ other methods. The pneumatic cabinet is a palliative measure nearly equal to the creosote baths.

Climate, especially a dry one, is indicated in bronchiectasis. To facilitate emptying the bronchiectatic cavities, the method of inverting the patient several times a day may be tried. The simplest method of attaining this object is to instruct the patient to hang himself over the edge of his couch, so that his legs rest on it while his body is supported by his hands on the floor. To diminish the fetor of the breath, garlic has been found to be very efficient. A clove of garlic may be chopped up and boiled in beef-tea, and administered several times a day. Garlic may also be given in capsules (two or three grains) three times a day. For children, drachm doses of the syrup of garlic, U. S. P., may be given three times a day and a proportionate dose to adults. The following mixture has been recommended by Molle from which excellent results have been obtained:

Eucalyptol	10 parts
Creosote	25 parts
Tincture of benzoin	50 parts
Copaiba	80 parts
Oil of sweet almonds, enough to make	200 parts

Thirty drops of the mixture are injected with a small quantity of milk into the rectum, and the amount gradually increased to one or two teaspoonfuls. One injection a day suffices. This treatment must be continued for months. Every endeavor should be made to improve the patient's hygiene. Cod-liver-oil with creosote may also be given. Pneumotomy for reaching the fetid cavities has been repeatedly performed, but results are not encouraging, unless we are dealing with a circumscribed bronchial dilatation. Therefore surgical intervention ought not to be encouraged unless their is a single superficial dilatation.

[TO BE CONTINUED.]

Society Proceedings.

PRELIMINARY PROGRAM, MEDICAL ASSOCIATION OF MISSOURI.

Forty-fifth Annual Session to be held at St. Joseph, Mo., May 20th, 21st and 22d, 1902.

First Day, May 20

MORNING SESSION, TEN O'CLOCK
AT Y. M. C. A. HALL

(To be devoted to Addresses of Welcome, General Business, and to Appointment of Committees.)

AFTERNOON SESSION, TWO O'CLOCK

C. H. Wallace, Chairman. St. Joseph
Report on the Progress of Gynecology

O. Beverly Campbell, Chicago
A Plea for the Conservation of the Uterus in Pelvic Inflammation.

H. E. Pearse, Kansas City
The Methods of the Control of Hemorrhage, and the Removal of the Pelvic Tumor.

R. T. Sloan, Chairman, Kansas City
Report of Committee on Progress of Medicine.

Charles G. Geiger, St. Joseph
Cellulitis.

William Porter, St. Louis
The Care of Tuberculosis in the Home.

Synopsis: Tubercular infection vs. hereditary, its limitations, sanitation and prophylaxis; care of the tubercular, home treatment vs. climatic changes, rest, alimentation, chest exercise; anemia an indication for the saline enema, out-of-door life, heart support, specific treatment, germicides, the use of tuberculin and serum.

F. H. Mathews, Liberty
Laboratory Diagnosis.

T. E. Potter, St. Joseph
Tubercular Peritonitis.

C. A. Mitchell, Blythedale
Senile Degeneration.

Synopsis: 1st. Physical and physiological effect, showing in the assimilating organs, next functional, etc. 2d. Mental effect pertaining to self-care, etc. 3d. Moral effect relating to those who come in contact with them.

C. W. Watts, Fayette
Auto-infection: Auto-phagism and Auto-intoxication.

M. D. Schmalhorst, St. Louis
Dyspepsia: A Study of the Gastric Functions Essential to Treatment: report of five cases.

Synopsis: It is essential in all chronic cases of dyspepsia to study the function of the stomach sufficiently to make a diagnosis. It is paramount to treatment to ascertain the amount and kinds of acids present, how slow or fast the stomach is in discharging its contents through the pylorus—its capacity and position. Indications for treatment.

EVENING SESSION, EIGHT O'CLOCK

AT LAKE CASINO

J. D. Griffith, Kansas City
President's Address.

Jabez N. Jackson, Chairman, Kansas City
Report of Committee on Reorganization.

D. C. Gore, Chairman, Marshall
Report of Special Committee on Medical Legislation.

Second Day, May 21

MORNING SESSION, NINE-THIRTY O'CLOCK

AT Y. M. C. A. HALL

Bransford Lewis, St. Louis
Presentation of Ureter Cystoscopes for Male and Female.

T. C. Witherspoon, St. Louis
The Causes of Appendicitis.

A. H. Cordier, Kansas City
Some Clinical and Operative Phases of Appendicitis.

G. Wiley Broome, St. Louis
Has Prostatectomy Come to Stay?

John D. Seba, Bland
Report of a Case of Fatty Tumor, with Specimen.

C. M. Nicholson, St. Louis
Removal of Tumor of the Liver, with Presentation of Patient.

J. W. Perkins, Kansas City
Intero-scapulo Thoracic Amputations, with exhibition of specimen.

C. J. Morrow, Kansas City
Surgical Procedures in Stricture of the Rectum.

A. V. L. Brokaw, St. Louis
Removal of an Upholsterer's Tack from the Right Bronchus.

A. H. Meisenbach, St. Louis
Empyema of Gall-Bladder.

AFTERNOON SESSION, TWO O'CLOCK

CARCINOMA SYMPOSIUM:

Opened by F. J. Lutz, St. Louis
Chairman Committee on Progress of Surgery

Etiology:
Roswell Park, Buffalo, N. Y.
N. Senn, Chicago

Robert C. Atkinson, Chairman, St. Louis
Report of Committee on Progress of Pediatrics.

A. H. Ohmann-Dumesnil, St. Louis
Some Cases of Diseases of the Nails. Two of Koilonychia.

Synopsis: After preliminary remarks on the etiology of diseases of the nails, the writer details two cases of Koilonychia, and then enters into a description of a successful treatment employed in each. Some other cases are then related, together with the successful treatment employed in them. The paper concludes with some general considerations upon both the etiology and proper therapeutics directed to the treatment of the conditions observed to be the respective causes of the conditions.

Third Day, May 22

MORNING SESSION, NINE-THIRTY O'CLOCK

Report of Committee on Nominations.

E. W. Schauffler, Chairman, Kansas City
Report of Committee on Medical Ethics.

A. W. McAlester, Chairman, Columbia
Report of Committee on Medical Education.

John D. Seba, Bland
Medical Education.

M. A. Goldstein, Chairman, St. Louis
Report of Committee on Laryngology.

Hal Foster, Kansas City
The Subcutaneous Use of Paraffin in Deformed Noses.

H. W. Loeb, St. Louis
Nose Bleed.

M. F. Weymann, Chairman, St. Joseph
Report of Committee on Ophthalmology and Otology.

George E. Bellows, Kansas City
The Pupil as an Aid in Diagnosis.

J. E. Jennings, St. Louis
Eye Strain; Its Causes and Treatment.

W. L. Kenney, St. Joseph
Cancer of Eyelids Treated by X-Rays. Presentation of patient.

Synopsis: Section of cancer presented. Patient presented. Description of methods of treatment. Time of appearance of dermatitis. Falling of beard. Discussion of theories regarding cure. X-Ray therapeutics in general. A portable apparatus presented.

J. W. Sherer, Kansas City
The Evolution of the Eye.

M. F. Weymann, St. Joseph
Demonstration of a Bandage for Eye and Mastoid Dressings.

AFTERNOON SESSION, TWO O'CLOCK

E. A. Donelan St. Joseph
The Importance of Medical Examiners for Schools.

Synopsis: 1st. To look after sanitation. 2d. Infectious and contagious diseases, 3d. Overworked pupils, resulting in nervous prostration and fevers. 4th. Tuberculosis is being spread in our schools from those who have the disease.

R. O. Cross, Kansas City
The State's Duty in the Matter of the Prevention of Pulmonary Tuberculosis.

C. C. Hurst, Salisbury
Etiology of Disease, Germ or otherwise.

Frank G. Nifong, St. Louis
The Active Principle of Quackery.

Report of Committee on Necrology.

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Pernicious Malarial Fever:

Quinine Hydrochlorate	gr. 45
Antipyrine	gr. 30
Distilled Water	m 90

Inject hypodermically 15 min. (cont. 7½ grn. of quinine) at a dose.

Methylene Blue (Medic.)	gr. 2
Quinine Hydrochlorate	gr. 3
Powd. Nutmeg	gr. 2
Powd. Black Pepper	gr. ½

For one capsule. One such capsule three to six times a day. (This formula is, of course, valuable for ordinary malarial fever.)—*Merck's Archiv.*

STATE MEETING AT ST. JOSEPH.

In this issue of the MEDICAL FORTNIGHTLY will be found the preliminary program for the forty-fifth annual meeting of the Medical Association of Missouri, which convenes in St. Joseph,

May 20, 21 and 22.

We would call particular attention to the fact that the report of the Committee on Reorganization will be made on the *first* evening. It is therefore important that every member be on hand the *first* day, and assist in the reorganization. The reports on Gynecology and Medicine will also be made on the first day.

On the second day the report on Surgery, and the Carcinoma Symposium, led by Drs. F. J. Lutz, Roswell Park and Nicholas Senn, will fill the program in an entertaining manner.

The railroads have made the usual rate of one-and-one-third fare on the certificate plan, for the round trip. Be sure to take a receipt, which will entitle you to one-third fare returning.

Headquarters for the Society will be Hotel Metropole, and reservations should be made as early as possible.

County and District societies are entitled to the usual number of delegates, and it is to be hoped all will be able to attend.

The entertainments provided by the citizens and profession of St. Joseph, will not in any way interfere with the scientific program, and all members are urged to take their ladies.

Make up your mind *now* to go to St. Joseph on May 20th!

LEPROSY IN THE PHILIPPINE ISLANDS.—The January report of Major Maus, Commissioner of Health in the Philippines shows that there are 2253 (1466 male and 787 females) lepers known to the commission in the islands.

THE GREGORY BANQUET brought a considerable number of outside physicians to the city, many of whom made this an occasion for a renewal of acquaintance with professional and lay friends. Our next issue will contain a full report of this happy event.

M. ARMAND GAUTIER announces in the Comptes Rendus that he has found that injections into the blood of minute amounts of sodium methylarsenate is a cure for malarial fever. He reports the complete recovery of nine patients who had contracted in Africa malaria of so severe a type as to be refractory to large doses of quinine. Blood-tests were made, and the disappearance of the specific hematozoa always followed the treatment; it also suppressed the anemia associated with malaria. The best dosage and means of administration, whether by mouth or hypodemically, must be determined by further research.—*American Medicine.*

MEDICAL MISCELLANY

Mississippi Valley Medical Association.—We are in receipt of the following announcement from Dr. Henry Enos Tuley, Secretary: The chairman of the Committee of Arrangements for the twenty-eighth annual meeting of the Mississippi Valley Medical Association, Dr. A. H. Cordier, has announced the dates of the next meeting in Kansas City, Mo., as October 15, 16, 17, 1902. The President, Dr. S. P. Collings, of Hot Springs, Ark., has announced the orators for the meeting, Dr. C. B. Parker, of Cleveland, O., to deliver the address in Surgery, and Dr. Hugh T. Patrick, of Chicago, the address in Medicine, selections which will meet the approval of every physician in the Mississippi Valley. A cordial invitation is extended every physician in the United States, but especially of the valley to attend this meeting and take part in its proceedings. Titles of papers should be sent the secretary, Dr. Henry Enos Tuley, 111 W. Kentucky street, Louisville, Ky., at as early a date as possible to obtain a favorable place on the program.

Joseph J. Kinyoun, M.D., Ph.D., late surgeon of the Marine Hospital Service and director of the Hygienic Laboratory at Washington, has assumed the directorship of the biological laboratories of the H. K. Mulford Company, at Glenolden, Pa. Dr. Kinyoun has not only served the government by being delegated special representative to the International Medical Congresses, by being late surgeon of the Marine Hospital Service of the United States and director of the Hygienic Laboratory at Washington, but also by representing the government on several occasions in the investigation of the progress of serum organotherapy and infectious diseases at home and abroad, in Berlin and Paris particularly, Europe in general and Japan. Of necessity his work carried him to and in contact with Professors Koch, Behring, Pasteur and Roux, under whom he has received special instruction and enjoyed the advantages of the study of bacteriology and allied subjects; this together with the natural tendency of this talents —that of original research—peculiarly fits him for the office he now assumes. The H. K. Mulford Company are to be congratulated for having secured the services of Dr. Kinyoun as director of their biological laboratories, and it is fair to predict the high standard of the Mulford biolgical products will be still further advanced.

Exophthalmic Goitre.—Wells (Chicago Med. Rec., Feb. 15, 1902) defines this as a nutritional disease, the symptoms being due to hyperthyroidism. This is proven by the glandular hyperplasia, the greater fluidity of the follicular contents; the remote and pathological antithesis which exists between this disease and myxedema and by the fact that feeding with thyroid extract will cause symptoms of exophthalmic goitre, whereas it will relieve the symptoms of myxedema. The exciting causes are unknown, profound mental impressions being absent in the majority of cases. Heredity is a predisposing factor, as in neuroses in general. The great majority of cases are in females, and the age is between fifteen and forty-five. The chief pathological changes is in the thyroid gland which is enlarged, its blood vessels are enlarged, there is a proliferation of the secretory follicles, the colloid material is diminished in quantity and assumes

a mucoid character. The veins are enlarged and the fat greatly increased. Changes in the heart and nervous system are not constant. Symptoms: onset is usually sudden; tachycardia is present in the vast majority of cases. The pulse is very unstable and slight excitement may cause it to run up very high; or it may be continuously very rapid; palpitation is present in nearly all cases, and is usually the first symptom noticed; throbbing pulsation in the cervical arteries and increase of pulsation in the retinal arteries is usually present. The veins of the neck are distended and may pulsate. The area of cardiac dullness and impulse is increased; systolic murmurs occur in one-third the cases, and in order of frequency are pulmonary, mitral, aortic, tricuspid. Enlargement of the thyroid is usually present, appearing early in the majority of cases and persisting for a long time, even after the disappearance of other symptoms in some cases. The enlargement is usually only moderate, the right lobe is most affected. Early it is soft and elastic, and the thrill, murmurs and local elevation of temprature give evidence of circulatory activity; later it may be nodulated. Exophthalmos is almost always present; its degree varies widely, it usually appears early and gradually; it is almost always bilatral. There is abnormal wideness of the palpebral opening; more or less inability to close the eyes, due to the ocular ptosis, slight retraction of lower lids, spasm of Mueller's muscle, causing marked retraction of the upper lid. The upper lid often fails to follow co-ordinately the movements of the globe in looking downward. There may be spasm of the levator palpebra superioris. There is often absence of facial contraction when the eyes are suddenly turned upward. In many cases there is insufficiency of the internal recti and rarely ophthalmoplegia externa, with loss of voluntary movements. A fine rythmical tremor, varying in degree, most noticeable in the hands and feet, is present in almost every case. Its frequency is 8 to 10 per second. Mild mental symptoms, instability, insomnia, etc., are usually present and in rare cases, graver forms. The skin is thin, soft and transparent; there is an increase in perspiration; flushing of the skin is present in marked cases; there is often pigmentation; the growth of the hair and nails is stimulated; respiration is usually accelerated, there may be dyspnea and sometimes lessened expansion of the chest during inspiration. The appetite is capricious; an obstinate diarrhea is often present. The temperature is usually elevated a degree or two. The course is usually chronic but may be acute. Diagnosis is easy in typical cases, and in atypical may usually be made by a careful consideration of the cardinal symptoms. The death rate is less than 12 per cent, according to Buchan, and is made up largely of the very severe cases. Prognosis is bad in cases where severe symptoms develop rapidly. Ordinary cases may take on an acute aspect at any time. Treatment is symptomatic: the patient should lead a regular life, free from excitement; gastro-intestinal irritation should be avoided. Codeine in doses of one-fourth to one grain two or four times a day, may be continued for months without inconvenience, and not only relieves the nervousness but slows the pulse and lessens the perspiration. Adrenaline hydrochlorate in 5 to 10 drop doses of the 1 to 1000 solution, relieves the capillary paresis and slows the heart. Digitalis and strophanthus are useful. Partial thyroidectomy should be practiced in acute cases, where medical treatment is inefficient.